

APPROPRIATIONS REQUEST FORM OREGON HOUSE DELEGATION FISCAL YEAR 2010

DEADLINE FOR SUBMISSION: FEBRUARY 13, 2009

PLEASE NOTE: As required by the House Appropriations Committee, all requests will be made public on the requesting Member's website.

1. Project Title:

West Coast Weak Stock Salmon Solutions:
Using "Real Time" Oceanographic and Genetic Research to Improve Science, Management, and Marketing of West Coast Ocean Salmon Fisheries

2. Organization Name and address:

Oregon Salmon Commission
P.O. Box 983
Lincoln City, OR 97367

3. Primary Contact name, phone number, mobile phone number, fax number and email:

njf@class.oregonvos.net

4. Project Location Address (if different from Organization):

This project will occur in ports in many coastal counties in California, Oregon, and Washington

5. Please describe the requesting organization's main activities, and whether it is a public, private non-profit, or private for-profit entity:

The Oregon Salmon Commission (OSC) is an industry-funded state commodity commission under the Oregon Department of Agriculture. Representing the 1,200 Oregon Salmon Ocean Commercial Troll Fishermen, the OSC is responsible for communication, promotion, education, and research of the wild-caught Oregon Ocean Salmon.

6. Briefly describe the activity or project for which funding is requested (please keep to 500 words or less.)

Researchers at the Coastal Oregon Marine Experiment Station at the Hatfield Marine Science Center in Newport, NOAA NMFS laboratories in California and Washington, and Washington Fish and Game -- working in collaborative partnerships with the Oregon Salmon Commission, California Salmon Council, and West coast salmon industry -- will combine at-sea and laboratory research in developing refined spatial and temporal approaches for significantly reducing by-catch of weak salmon stocks and avoiding long term closures of the salmon fishery. Spatial and temporal location data (i.e., locations and times salmon samples are taken) will be combined with oceanographic information. This knowledge could allow salmon fishing managers to reduce large-area closures by directing fishing activity onto healthy stocks and away from weak stocks. The specific question addressed by the West Coast Collaborative Project is: Can genetic markers and information about salmon movements be used to minimize harvest of Klamath River or other "weak" Chinook stocks needing protection?

7. Has this project received federal appropriations funding in past fiscal years?

Yes

7a. If yes, please provide fiscal year, Department, Account, and funding amount of any previous funding.

FY 09 CJS; Department of Commerce \$434,901

8. Federal agency and account from which funds are requested (Please be specific – e.g. Department of Housing and Urban Development, Economic Development Initiatives account):

CJS; Department of Commerce – NOAA/Research/PAC

9. What is the purpose of the project? Why is it a valuable use of taxpayer funds? How will the project support efforts to improve the economy and create jobs in Oregon?

Although this research project will be conducted in California, Oregon and Washington, the significance of maintaining a healthy salmon population and ultimately a food source is vital to the interests of this Country.

10. Have you requested funding for this project from other Members of Congress? If so, who?

Funding is being sought through the Oregon Congressional Delegation (Senator Merkley, Senator Wyden, Representative Blumenauer, Representative DeFazio, Representative Walden, Representative Wu), California Congressman Mike Thompson, Congressman Sam Farr, Congresswoman Lynn Woolsey, Senator Dianne Feinstein, and some Washington Congressional members

11. Funding Details:

a. Total project cost (all funding sources and all years):

\$7,800,000

b. Amount being requested for this project in Fiscal Year 2010:

\$7,000,000. We are requesting \$7 million per year over three years for a three state, West Coast project.

c. What other funding sources (local, regional, state) are contributing to this project or activity? (Please provide specific dollar amount or percentage.)

A smaller project was funded in 2007 in California and Oregon through the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS). The 2008/09 project is being funded through 2006 Klamath Disaster funds \$931,182.

A Saltonstall-Kennedy grant for \$1,000,000 has been approved to be shared between Oregon and California

d. Do you expect to request federal funding in future years for this project?

We will be requesting \$7 million in FY 11 also.

e. Breakdown/budget of the amount you are requesting for this project in FY 2010.

(e.g. salary \$40,000; computer \$3,000):

Fishermen Compensation 40% \$2.8 million

Research/Laboratory Analysis 30% \$2.10 million

Equipment 14% \$0.98 million
Program Administration & Management 10% \$0.70 million
Communication 3% \$0.21 million
Travel 2% \$0.14 million
Other Supplies 1% \$0.07 million

This project will be a collaborative research partnership between the West Coast salmon troll industry and University, federal and state agency scientists. The funds will be used to plan, conduct, analyze, and communicate salmon research in order to improve salmon management. Specific funds will be used to support researchers and graduate students, pay for ship time and other industry participation in all research activities, travel and meetings, publications, and equipment.

f. Please list public or private organizations that have supported/endorsed this project:

Port of Newport, Don Mann, Manager
Rogue King Seafoods, Gold Beach, Dixie Boley
Port of Garibaldi, Valerie Folkema, Commissioner/President

g. Is this project scalable? (i.e. if partial funding is awarded, will the organization be able to use the funds in FY 2010?):

Yes

Appendix: Background Information

Substantially reduced escapement levels for Klamath River and other weak and ESA listed salmon stocks have reduced Oregon and West Coast salmon troll fishery landings by 90%. This has resulted in the loss of 1000's of jobs and millions of dollars in annual coastal income. Presently, salmon ocean managers have no access to "real time" data on stocks and are unable to differentiate among stocks at local spatial and temporal scales. The result has been large area closures for entire seasons. New science and management tools are needed that can differentiate stocks in "real time" at refined spatial areas, and link management of freshwater, estuarine, and coastal salmon ecosystems. The following project takes advantage of evolving technologies and pilot project research to enhance ecosystem-based science, modernize fishery management, and maximize economic value of California, Oregon, and Washington commercial and recreational fisheries.

Based on a series of meetings in 2005 and 2006 between Oregon's salmon industry and the Hatfield Marine Science Center research community, fishermen and scientists designed the "CROOS-Project" (Collaborative Research on Oregon Ocean Salmon) to test the feasibility of using salmon fishing vessels to collect oceanographic and "genetic stock identification" (GSI) information. In late June 2006 a one-year pilot project was approved by the Oregon Legislative E-board and funded by the Oregon Watershed Enhancement Board. The proposal had four main objectives: 1) test the feasibility of using fishermen to independently collect science information; 2) test digital and bar coding technologies for recording, storing, and transmitting science and marketing data; 3) test the ability of genetic scientists to evaluate within 24 hours the river of origin of harvested wild and hatchery salmon; and 4) use the information to develop research concepts to support salmon science, management, and marketing. The objectives have subsequently expanded to include: (i) integrating genetic information with oceanographic and biological (e.g., parasites) data; (ii) testing onboard dataloggers; and (iii) reporting information via the web.

In addition to the research effort in Oregon, California and Washington have been analyzing ocean salmon fisheries using genetic technology. Researchers at the National Marine Fisheries Services Southwest Fishery Laboratory were beginning to genetically analyze charter salmon harvests to identify the stock of origin of recreational catches. In 2007 the California Salmon Council and commercial salmon troll industry teamed up with the NMFS Southwest Laboratory to conduct a cooperative pilot project to sample commercial catches. Beginning in 2006, Washington Department of Fish and Wildlife begin an active area of research comparing direct observations of fishery population composition using genetic analysis with compositions expected given current management designs. A variety of projects have been conducted for fisheries along the outer coast and within the Puget Sound region. A common objective has been to determine the populations present within a fishery collection, regardless of whether the sample was from a targeted fishery, fishery by-catch, dockside collection, or sub-legal sized fish sampled from fishing vessels.

By October 1, 2007, over 150 commercial fishermen had been trained and employed in these pilot projects. These fishermen provided 1,000's of tissue, scale and otoliths samples, and sold over 4,000 barcoded Chinook salmon in regional and national markets. Over 2,000 tissue samples were analyzed within 24 hours after the vessel landed and river basin or hatchery identified -- with a 95% average probability of "correct assignment". Forty-three out of forty- four fish containing coded wire tags were correctly assigned to the hatchery of origin. Over 50% of funds went as direct payments to fishermen to compensate for their participation. A web site for the CROOS project was developed using Global Information System software to map and report the scientific data (<http://projectcroos.com>).

Based substantially on the promising results of these pilot projects, meetings were held in 2006 and 2007 by West Coast industry and scientists to discuss developing a West Coast Collaborative Project. These meetings included over forty participants from federal and state agencies for salmon science and management, native tribes, and representatives from the Oregon, Washington, and California salmon troll industries. The participants agreed to: 1) request a Scientific Research Permit from the National Marine Fisheries Service Northwest Region for the West Coast that would direct research on ocean salmon science and management using GSI techniques; 2) coordinate research between NMFS laboratories, state agencies, Universities, and fishing industries from the three West Coast states; and, 3) use developing protocols to direct and facilitate cooperative fishery GSI-based science to improve salmon science, management, and marketing. Specific components of the project include:

1. Conducting Genetic Stock Identification (GSI) Science and Spatial Analysis: Scientific hypotheses regarding the location and migration of specific stocks of Chinook salmon will be tested. Research objectives will include determining whether hatchery fish behave differently than wild fish, whether some stocks are located near or offshore, and whether some stocks have unique migration patterns.
2. Oceanography Data Collection and Analysis: The project will use a combination of oceanographic information collected by vessels and satellites coupled with other biological information, to understand the relationship between oceanographic conditions and salmon behavior, and develop ecosystem-based predictive models of salmon migratory behavior. The data will be shared in virtual "real time" between scientists and fishermen.

3. Evaluating Ocean Life History and Etiology of the *Shasta Parasite*: Research will be conducted in collaboration with scientists studying Klamath river parasites. Tissue samples of marine harvested fish will be analyzed to determine the effects of parasites on the marine life phase of Klamath salmon and to integrate freshwater and marine investigations of Klamath parasites.
4. Testing Fishing Vessel “Dataloggers”: The pilot projects showed that existing commercial digital dataloggers are inadequate given the needs for a tough waterproof portable logger that can be used in real time on small fishing vessels. We will evaluate existing prototypes to test datalogger systems that meet project needs but also have application for collaborative research in fisheries throughout the U.S. and the world
5. Barcoding, Traceability, and Salmon Marketing: Most fish will be bar coded so that science and sustainable fishery information will be “linked” via websites to harvested salmon using GIS and digital traceability concepts. Markets will be provided information on river basin of origin, fishing vessel, time-location of capture, and other quality, safety and sustainability data. Market research will be conducted to determine development and management of digital information that meets the needs of retailers, food service, and consumers.
6. Designing a Multiuse “Real” Time Website: A prototype GIS-based website will be fully designed, developed, and tested to accommodate multiple audiences. Based on focus group discussions, web pages or portals will be designed specific to the “real time” needs of different audiences including scientists, managers, fishermen, seafood markets, and the public.
7. Fishery management analysis: The project will evaluate the management implications and potential that these new technologies provide. Management simulations will be conducted with salmon managers in real time to manage salmon fishermen (closing areas, moving vessels, revising harvest limits, etc.). All data will be analyzed using bioeconomic models to test new approaches and incentives for managing the salmon fishery to maximize state, regional, and national benefits.